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# Identifying suspicious bodies? Historically tracing criminal identification technologies in Portugal

Diana Miranda<sup>1</sup>

## Abstract

This article explores how criminal identification technologies evolved in Portugal since the end of the 19<sup>th</sup> century: from anthropometric measurements to descriptive, photographic, dactyloscopic and genetic methods. The historical trajectory of these identification technologies allows us to reflect on the continuities and discontinuities of past and current practices that aim to inscribe the individual identity as a bureaucratic category. The chronological and geographical contexts are fundamental to understand the archival uses of different techniques that seek to document (on paper and electronically) the suspicious body. Through the collection of documentary evidence (such as case files, reports, personal records and legislation), this historical analysis situates the use and implementation of these techniques in the Portuguese context. We demonstrate that the need to identify the *criminal* and to follow technological developments has been constantly used as a political argument to legitimise the implementation of these technologies. But we also conclude that these identification procedures tend to be extended to the entire population, widening the political will to identify and monitor not only “suspicious” bodies but also those who are regarded as “respectable” citizens.

## Introduction

Different techniques have been used to identify individuals and their bodies, namely those deemed to be “dangerous” and with a certain stigma, as is the case of criminals. There are several examples of archaic practices of criminal identification that aimed to “write in the body” (Torpey 2003), such as the shaved hair, branding or even bodily mutilation and disfigurement (Carney 2017; Cole 2001; Groebner, 2007). In Portugal, the ritual of marking on the skin of *criminals* with a hot iron was a common identification practice until the 16<sup>th</sup> century, when these marks inscribed the *criminal's face* were abolished (Pina 1931, 1938 and 1939). This form of identification and punishment would eventually be replaced by paper files. Indeed, the history of identification practices in Europe is linked to the bureaucratic development of the modern state, where written documents containing personal information were used for administrative purposes and allowed the state to gather knowledge over its population (About, Brown and Lonergan, 2013; Caplan and Torpey, 2001; Foucault 1979; Groebner 2001 and 2007; Torpey 2003).

During the 19<sup>th</sup> century, with the emergence of the nation state and industrialization, transformations at the level of monitoring and surveillance occurred and new forms of collecting information about citizens in order to maintain order and

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control emerged (Giddens 2002; Szreter and Breckenridge, 2012; Weller 2012). The scientific knowledge had an impact on these actions of surveillance and control of “dangerous” and “risky” populations by the state (Sekula 1986). It allowed the emergence of new forms of classification and storage of information that approach the *criminal body* as a text to be read. This article aims to explore such an approach by mapping the historical trajectory of criminal identification technologies since the end of the 19<sup>th</sup> century in Portugal. This trajectory allows us to reflect on the continuities and discontinuities of past and current identification practices in this particular context by mapping its social, political and cultural particularities.

Simon Cole (2001: 305) argues that there are 3 related modes of inquiry when considering the history of criminal identification technologies more generally: *archival* (how a specific criminal body is linked to itself), *forensic* (how a particular criminal act is linked to a criminal body) and *diagnostic* (how a criminal body might provide signs of a criminal propensity). In his words, “historically these three modes of inquiry have been strongly intertwined; to gain acceptance as a “criminal identification technique”, a new technology must provide at least a gesture toward all three” (Cole 2001: 305). This article will explore, in particular, the *archival* uses of different techniques that seek to document (on paper or electronically) a particular criminal body in order to link it “to itself across space and time” (Cole 2001: 305). As we will see, the use of anthropometric, descriptive, photographic, dactyloscopic and genetic methods exemplify such *archival* uses.

This historical trajectory starts with the development of anthropometry (measurements of bodies and registration of other physical characteristics), photography and dactyloscopy (fingerprint identification). All these elements were seen as the solution to discover and identify the true *criminal*. In the words of Caplan and Torpey (2001): “these emergent identification procedures drew on a repertoire of physical signs and measurements, but represented them in written and visual records, both individually portable and centrally filed” (p. 8). In the 21<sup>st</sup> century, due to the discovery of human DNA structure, this source of 'truth' shifted to identification methods based on genetics. If a given body is identified and classified as suspicious or even *criminal*, the state would make it visible and subject to surveillance practices. Since all these practices aimed to collect and classify information (physical, visual or biological), storage capabilities increased with the emergence of digital technologies and the use of computerised databases.

David Lyon (2009) proposed that identification is the starting point of surveillance. As we will explore, from a socio-historical perspective, these identification procedures tend to be extended to the entire population, widening the political will to identify and monitor not only “suspicious” bodies but also those who are regarded as “respectable” citizens. For this reason, this article will analyse the intertwined trends related to both criminal and civil identification systems and its association to different bureaucratic governmental institutions. It will consider the political and scientific discourses that accompany the emergence and implementation of these technologies, by arguing that the need to identify the *criminal* and to follow technological developments has been constantly used as a political argument to legitimise such implementation. This article will contribute to historical and comparative research on identification practices both in the criminal and civil domains.

## Travelling through history

In order to map the socio-historical background of criminal identification technologies in the Portuguese context, we collected and examined documentary evidence from the late 19th century to present day. These historical developments were subject to analysis carried out in libraries and historical archives, both physically and digitally, in order to understand “how things happened” (Knepper 2017: 23) and trace (dis)continuities. By gathering informational resources related to practices of authentication and identification, we considered the political and scientific discourses that accompany the implementation of such practices since the end of the 19<sup>th</sup> century. It must be highlighted the research was mainly conducted in the historical archive of prison services<sup>2</sup> based in the north of Portugal (prison of Santa Cruz do Bispo)<sup>3</sup>. Through the analysis of such documentary evidence (namely case files, reports, personal records and legislation), we were able to situate the different *archival* identification uses (Cole 2001) in a broader social context, explore the (dis)continuities and, lastly, understand the current political and cultural logics (Garland 2001). Indeed, in the words of Caplan and Torpey (2001):

“The history of identity documentation is integral to an understanding of the expansion of state and police practices that have constituted the modern bureaucratic welfare and security state, and that are becoming ever more elaborate. Individual identification also forms a crucial matrix for the cultural and political self-understanding of the subject and citizen” (p. 12)

Such historical, political and cultural conditions allow us to reflect “upon the contingency, singularity, interconnections, and potentialities of the diverse trajectories of those elements which compose present social arrangements and experience” (Dean 2003: 21). We have also combined this historical analysis with the literature within the field of surveillance studies in order to situate these state identification techniques within and beyond a particular national jurisdiction and political system (About, Brown and Lonergan, 2013; Boersma et al. 2014). This article provides an empirically-researched historical resource that aims to contribute to comparative knowledge on the use of identification technologies. It allows, in *Foucauldian* terms, the development of a *history of the present* (Foucault 1998). In the words of Phil Carney (2017), this genealogical account allows us to examine “phenomena through their emergence and re-emergence in fields of power, tracing lines of historical descent to the present day” (p. 281). This approach also had influence in the work of David Garland (2001) where history is used *to rethink the present* (Garland 2001: 2). In his words: “history is not the replacement of the old by the new, but the more or less extensive modification of one by the other. The intertwining of the established and the emergent is what structures the present, and our analyses should reflect that fact” (Garland 2001: 168).

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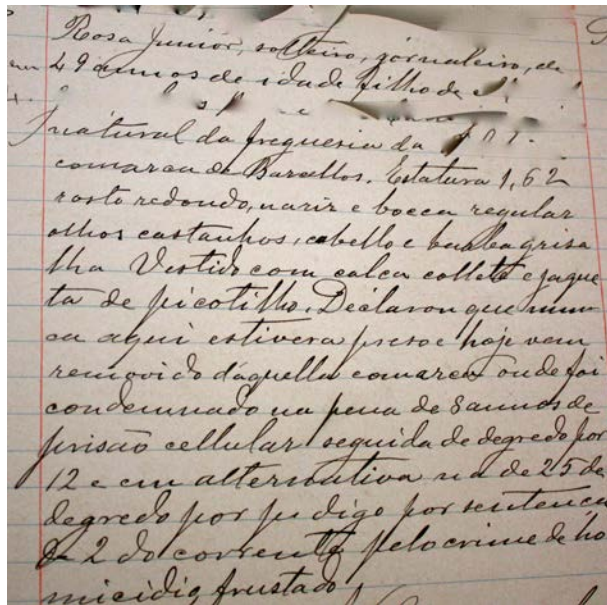
<sup>2</sup> The access to prison administrative documentation related to prisoners (records and personal files) occurred with respect for personal data in accordance with Circular No. 3/GDG/2002 issued by Prison Services.

<sup>3</sup> We also had access to private and public libraries such as Pedro Miguel Frade (in the Portuguese Centre for Photography, Porto), Rocha Peixoto (Póvoa de Varzim) and others (Porto - Biblioteca Pública Municipal, Lisbon - National Library, Coimbra - Biblioteca Geral da Universidade de Coimbra, Guimarães - Biblioteca Raul Brandão and Braga - Biblioteca Geral da Universidade do Minho, Biblioteca Centro Estudos Humanísticos and Biblioteca Salgado Zenha).

## ***Vigilat ut quiescent*: from anthropometric measurements to fingerprinting**

Before the implementation of anthropometry in Portugal, the prisoners were already subject to identification procedures that recorded their physical characteristics (such as height, weight, skin, iris and hair colour, tattoos, scars, blemish, clothing etc). At this point, the identification procedures were mostly descriptive and José Ferreira Borges (1840) was one of the first to recommend rigorous identification procedures through descriptive observations based on morphological, somatic and chromatic elements (Pina 1931 and 1939).

The use of these elements when identifying the *criminal* was quite frequent in the late 19<sup>th</sup> century, as we could see in different documents while doing research in the historical archive of prison services. As an example, when analysing prisoners' records (dated back to 1890 – 1899) from the old prison of Porto, we noticed the constant reference to “height”, “face” (regular mouth, eye colour, hair and beard), clothing and declarations about never been in jail before. Figure 1 is an example of those records, dated back to 1893, and it says “Height 1,62, rounded face, regular nose and mouth, brown eyes, grey hair and beard. Wearing trousers, waistcoat and a pilling jacket. Declares that has never been in jail here” (*translation of the author*).



**Figure 1 - Prisoner's record, 1893 (Source: Historical archival of Prison Services)**

By the end of the 19<sup>th</sup> century, Portuguese academics such as Freire (1889), Frias (1880) and Branco (1888) started to exchange and translate knowledge into practices with criminal justice institutions, so the “scientific method” could be applied in the identification of the *criminals*. The methods of the natural sciences were applied to legal knowledge and the study of crime, with the aim of obtaining the “scientific portrait” of *criminals*. Portugal was ready to adhere to criminal anthropology and, in particular, the positivist ideas of Cesare Lombroso<sup>4</sup>. Not only the academic but also the political discourse highlighted the need to follow other countries and keep up with the developments of such knowledge and its application in criminal justice practices.

<sup>4</sup> Following such ideas, the body of the *criminal* was perceived as: “an index of the interior states and dispositions of suspected individuals, a sign of the evolutionary status of groups, and a more or less reliable indicator of present and future risks to society” (Horn 2003: 1)

In the words of Catarina Frois (2013): “the motto of modernization assumes a deeper meaning than that of a mere political slogan. It symbolizes progress, development and improvement, the solution that will once and for all change Portugal’s condition as a peripheral territory” (p. 4). The modernisation enabled by technology, the value of foreign models and the need to develop contrast, in terms of political discourse, with the recognition of a delay, a certain “inferiority complex” and a perceived peripheral and backward condition of Portugal (Frois 2013; Nunes & Gonçalves 2001). The value of foreign models is well illustrated by Affonso Costa (1895), a lawyer and politician that played a significant role during the Portuguese First Republic (as Minister for Justice and then as Prime Minister and Finance Minister): “England, Prussia, Belgium, the United States, the Republic of Argentina and other countries, have already established their anthropometric divisions. Why don’t we follow them? Why don’t we imitate, in this regard, France?” (p. 198, *translation of the author*).

Alphonse Bertillon (1881 and 1883) was responsible for the first modern system of criminal identification in the police of Paris. Bertillon (1881 and 1883) created the first police anthropometric services with the aim of determining the identity of recidivists by using their body and physical features (Pavlich 2009; Sekula 1986). Initially, Bertillon’s codification system was processed through photographs and the classification of the right ear. In a second stage, it involved the measurements of the body and the registration of other physical features (such as eye, hair and skin colour and particular scars or tattoos) or even fingerprints (About 2004 and 2011; Cole 2001; Finn 2005 e 2009; Lacassagne 1914; Locard 1914). The physical appearance and bodily features were then transformed to text through what Bertillon designated *portrait parlé*. In the words of Simon Cole (2001), “Bertillon created a definition of the individual that the body could not escape” (p. 53).

David Garland (2002) explores the development of a *governmental project* that aims to control and identify the recidivists by increasing the use of criminal identification methods by the police and of convicted offenders’ records. Different countries adopted the Bertillon system and its procedures, as was the case of Portugal. In the early 20th century, António Ferreira Augusto (1902), responsible for the initiative of installing anthropometric offices (*postos antropométricos*) in Portugal, stated the need to disseminate the system of Bertillon and establish such offices in Portuguese prisons. This would allow the verification of the identity of the prisoner, including his/her legal and criminal situation. In the words of António Ferreira Augusto:

There will come a time when the system of Bertillon and its advantages are known, his name will be blessed and we will inscribe in the anthropometric offices the words the old [generations] inscribed on the doors of their courts: *Vigilat ut quiescant*” (Augusto 1902: 9 *translation of the author*)

The identification of *criminals* was established in 1899 by the Decree of November 16<sup>th</sup>, and the anthropometric offices were created in order to take anthropometric measurements from all the prisoners<sup>5</sup>. Two years later, another law (Decree of September 21<sup>st</sup>) reorganised these services and regulated the installation of offices, establishing criminal identification procedures. However, Augusto (1902) was

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<sup>5</sup> With the exception of the individuals released on bail that would not be subject to these identification procedures. For this reason, these procedures would only occur when the individuals entered the prison. At that time, this was already seen as an injustice towards the poor (Augusto 1902). Criminality was associated to those that represented a “threat” and they were, consequently, the specific target of surveillance mechanisms.

mindful that such offices needed to be installed in practice and not just legally. Such inability to implement a system of identification by the state can be illustrated not only in Portugal but also in other countries (such as Germany, Russia or even Japan), as “the legislation or decrees by themselves are not enough to ensure the acceptance or efficacy of a system of identification” (About, Brown and Lonergan, 2013: 8)

It was only on the 1<sup>st</sup> of March 1902 that the first anthropometric office (*Posto Antropométrico do Porto*) initiated its activities and the approach was subsequently extended to other parts of the country (Lisbon and Coimbra). The most important measures for a precise anthropometric identification, according to Bertillon, were being used (Augusto, 1902): namely the height of the individual standing (Figure 2) and seated (Figure 4) the length of the arms opened (Figure 3), the length and breadth of the head (Figure 5), the right ear (Figure 6), the left middle and ring fingers (Figure 7), the left foot (Figure 8) and the left arm from the elbow to the tip of the middle finger (article 87, Decree of September 21<sup>st</sup>, 1901).

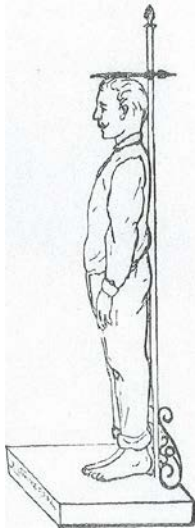


Figure 2 - Length (Source: Augusto 1902)

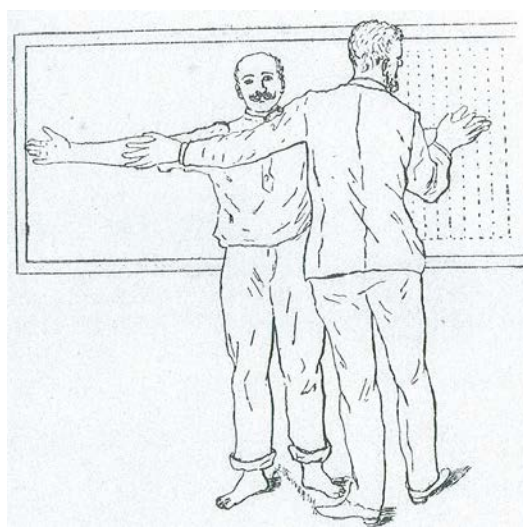


Figure 3 - Height (Source: Augusto 1902)



Figure 4 - Height, seated (Source: Augusto 1902)





Figure 5 - Length and width, Head (Source: Augusto 1902)

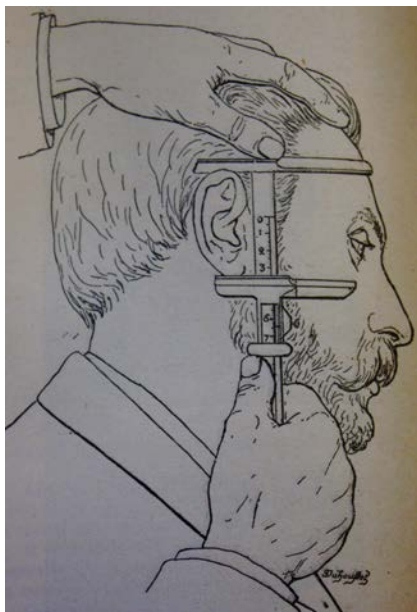


Figure 6 - Length, Right ear (Source: Augusto 1902)

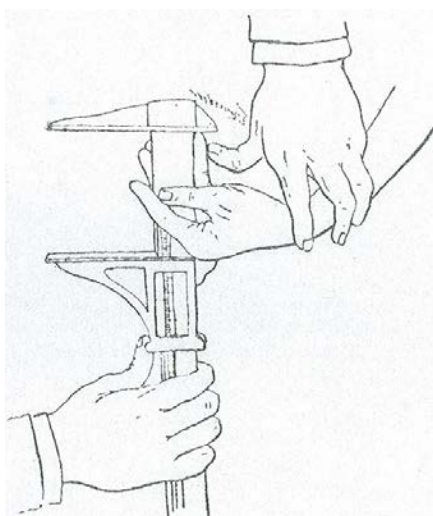


Figure 7 - Left middle and ring fingers (Source: Augusto 1902)





**Figure 8 - Left foot (Source: Augusto 1902)**

These measurements followed very detailed and strict procedures that required the use of different tools and very specific movements of both bodies - the prisoner and the operator leading the “dance” choreographed by Bertillon (Cole 2001). During this “dance”, the prisoner should have no shoes, trim both hair and nails (left hand and left foot) and fold the sleeves for more exact measurements (Augusto 1902). While conducting research in the historical archive of prison services, we found references in the inventory not only to different measuring tools (such as compasses) and furniture, but also scissors that were used to cut prisoners’ hair and nails. The registration of these “exact” measurements on the paper occurred through a “scientific language” (Cole 2001), through accurate descriptions and standardised abbreviations. In the words of Simon Cole (2001): “the criminality of the body could be made visible, but only by virtue of the link Bertillon had constructed between it and the written inscriptions on the criminal record” (p. 59).

The photographs (profile and front), physical descriptions and fingerprints were also included in such records. Even if dactyloscopy was only regulated and enacted officially later in 1904 (5<sup>th</sup> of July), it is possible to find fingerprints and palm prints in the records of the anthropometric offices since 1902 (Porto) and 1903 (Lisbon, see Figure 9).



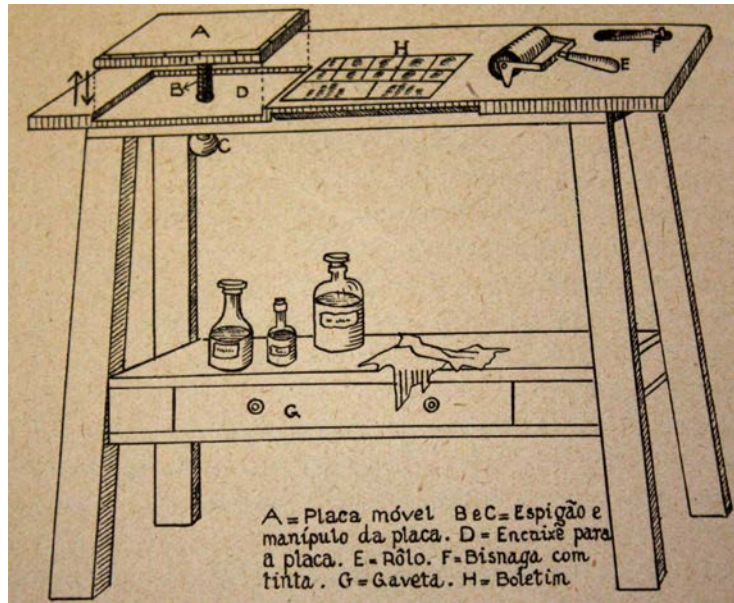


Figure 10 - The material used during fingerprint identification procedures (Source: Pina 1939)

The scientific community quickly split between these two identification methods and different countries opted to use either fingerprinting or anthropometry (Cole 2001). However, in the beginning of the twentieth century, just like Austria and Germany (Cole 2001), Portugal continued using both, by combining anthropometric data with fingerprint classification<sup>7</sup> (Madureira 2003). This dual use did not last that long and the fingerprint eventually took over as the dominant identification system (see Figure 11), since it was suggested that “fingerprinting could transform criminal justice by basing it on a stronger form of truth” (Cole 2001: 169).



Figure 11 - Prisoner's identification record - Porto, 1929 (Source: Pina 1931)

<sup>7</sup> In Portugal, younger male prisoners (less than 25 years) and female prisoners were only subject to dactyloscopic identification (portaria 5th of July, 1904) but male adult prisoners would still be subject to anthropometric measurements. In 1906, by the Decree of January 18th, a new Anthropometric Offices' Regulament was published, stipulating the use of both Bertillon's anthropometric and dactyloscopic systems only when identifying male adult prisoners (aged between 25 and 45). For men younger than 25 and older than 45 years and female prisoners, only the dactyloscopic identification system was used (Galton-Henry classification system).

When the identification services of the Criminal and Police records were reorganised by the Decree of March 17<sup>th</sup> 1906, the fingerprint started being included in these records (Pina 1931 and 1939). In 1936, these identification services were reorganised again (by the Decree-Law n.º 27.304 of December 8<sup>th</sup>) with the purpose of creating a general archive of criminal and police records. The importance of such records in the identification of the recidivist and its key role in criminal investigation was highlighted and, according to Article 13 of the Decree-Law, all the criminal and police records should contain, among other things, the identity of the person to whom they relate: namely their characteristic *marks* and fingerprints.

The authoritarian regime led by António de Oliveira Salazar would lead to different strategies of information gathering and control. This period of intense political control, repression and censorship (1926 - 1974) included, for instance, the use of political police and a network of informers that would provide information on citizens' actions and beliefs. Also, as previously explored in relation to anthropometry, the need to follow technological developments has been one of the strongest arguments when legitimising the implementation of identification technologies in Portugal. However, this was definitely not the case during this long, far-right dictatorship that led to a position of resistance towards the advances of modernisation: progress and modernity were deemed to be threats rather than models to follow (Machado & Frois 2014).

Due to this political situation and increased state control mechanisms, the administrative services were disorganised and the criminal and police records were not unified with the use of fingerprints<sup>8</sup> (Madureira 2003). It was only a couple of years later, once the authoritarian regime was overthrown (April 25, 1974), that a central file for both civil and criminal identification was organised (decree-law n.º 63/76, 24<sup>th</sup> January) under the responsibility of CICC - the Civil and Criminal Identification Centre (regulated by the decree-law n.º 64/76, 24<sup>th</sup> January). We will now explore the alignment of criminal and civil identification practices, namely by considering the development of a dactyloscopic file<sup>9</sup> and the identification card (with identifying elements such as the photograph, fingerprints and height). We will do this by briefly analysing the proximity of civil and criminal identification criteria and consider the expansion of a system of civil registration following the political dictatorship that ruled Portugal during the 20<sup>th</sup> century.

### **Criminal and civil identification practices**

In the late 19<sup>th</sup> century, a network of criminologists gathered at international criminal anthropology congresses highlighted the need “to see the system of anthropometric identification adopted and extended to all countries, not only to identify repeat offenders but also to certify individual identity reliably and quickly” (Mattelart 2010: 19). In the Portuguese context, António Ferreira Augusto (1902)

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<sup>8</sup> In 1936, this regime also brought significant changes to criminal law and, in particular, to prison services, namely the implementation of a set of security measures and classification of *criminals* (Decree-law no. 26.643, 28<sup>th</sup> May).

<sup>9</sup> In 1936, the dactyloscopic forms used for criminal identification purposes needed to be sent to the Criminal and Police Records Archive (decree 27.304, 8<sup>th</sup> December) and, at the same time, the decree 27.305 reorganised the Civil Identification services so a general dactyloscopic file could be established (Madureira, 2003; Pina, 1939). Again, in 1991, the Law of Civil and Criminal Identification (Law no 12, 21<sup>st</sup> May) stated not only the collection of the extracts of criminal decisions by the courts in order to know the criminal history, but also the collection of fingerprints of those convicted in Portuguese courts for the organization of a dactyloscopic file (art. 13.º).

argued that for a more efficient application of Bertillon's method, the anthropometric measurements should be recorded in all the documents used to verify the identity of an individual. The first official identification document, the Portuguese identification (ID) card, was established 10 years later (Decree no. 228 27<sup>th</sup> of September 1912). This ID card was applied to public sector workers from all ministries, containing the fingerprints of the right hand, photograph (front and profile), anthropometric elements and description of particular marks and scars (Pina 1931 and 1939). This is an example of *archival identification* (Cole 2001), as these ID cards allow the association of a body to a record.

They also exemplify how the techniques that were firstly applied in the domain of criminal identification were then applied in the civil domain. This first attempt to collect and store civil identification elements turned out to be a failure but, as we will see, other attempts emerged in the following decades (Machado & Frois 2014; Machado & Prainsack 2014; Madureira 2003). In 1918, the Identification Archive of Lisbon was created in order to replace the Central Archive of Identification and Criminal Statistics by the Decree no. 4.837, of September 25<sup>th</sup>. This decree mentions the identity card and the need to identify and know the criminals' judicial past in order to fight criminality. This decree links the need and creation of an identity card to the emergence of a criminal record. There is an approximation of civil and criminal identification criteria and the Portuguese civil identification services started its expansion (Madureira 2003; Pina 1939).

The ID card was created in 1919 (decree No. 5266, 19<sup>th</sup> March) and it became the means of civil identity authentication for all the Portuguese citizens (Madureira 2003; Pina 1931 and 1939). It included dactyloscopic (Galton-Henry classification system) and photographic elements, complemented or not with anthropometric elements (Figure 12). Again, just like with criminal identification practices, descriptive, photographic, anthropometric and dactyloscopic elements were also used in the civil domain (Miranda 2014).

Figure 12 - ID card model, 1919

In 1927, the civil identification services were reorganised and the services operating in the Identification Archive of Lisbon were decentralised to northern, central and southern archives (Pina 1939). In the same year, the division of Porto is also reorganised (Decree 13,254, 9<sup>th</sup> March) by adding to it the capacity to issue ID cards and by renaming it to Division of Criminal Anthropology, Experimental Psychology and Civil Identification (*Repartição de Antropologia Criminal,*



*Psicologia Experimental e Identificação Civil*) (Pina 1939). The same happened with the division in Coimbra (the Institute of Criminology) and both of them, as regional Identification Archives, initiated the provision of civil identification services alongside identification in the criminal domain (Pina 1939). The identification system was still mixed and included descriptive and anthropometric observations (height, eye colour, scars), fingerprints (right index finger) and photographs (Madureira 2003). The same applies to the identification record established in 1973 (Decree-law no. 555, 26<sup>th</sup> October and Law no. 2, 10<sup>th</sup> February), based on an identification number, height, fingerprints, particular signs and nicknames for each citizen.

Such state intervention and the schemes used by authorities to register individuals are ultimately configured by how these identification techniques are negotiated and even resisted by the citizens (About, Brown and Lonergan, 2013). For instance, in countries such as the United States, Canada or United Kingdom, some of these identification practices are still associated with the identification of *criminals*. The collection and storage of fingerprints, for instance, is usually seen in a pejorative way (Cole 2001; Cole & Lynch 2010; Frois 2008; Lyon 2001; Machado & Frois 2014). Identity cards too are seen as a police state practice and as an instrument of repression that raise questions about fundamental rights and freedoms<sup>10</sup> (Lyon & Bennett 2008; Lyon 2009; Mattelart 2010). However, as Catarina Frois (2011) stated, this does not seem to be the case in southern European countries like Portugal, Spain or Greece. The legacy of authoritarianism shared by these countries has an impact at a cultural level (Machado & Frois 2014), which helps to understand how the public perceives different forms of surveillance and oppression (see Samatas 2005 and Tejada 2014). In Portugal, it was possible to create and develop a database with the fingerprints that were taken from all the citizens with the purpose of issuing an ID card (or citizen card, as it is designated nowadays, due to the Law no. 7/2007, 5<sup>th</sup> February<sup>11</sup>), without any opposition from the citizens (Frois 2008; Machado & Frois 2014; Machado & Prainsack 2014; Miranda 2014).

Despite the low levels of trust in the state and public institutions (Cabral, Vala & Freire 2003) (namely in the criminal justice system and, in particular, the police), throughout the historical trajectory of state identification practices, Portuguese citizens have always accepted such practices and technologies passively as part of a bureaucratic process that formalises their civil status. As mentioned by Szreter and Breckenridge (2012): “large systems of registration, whether of people or of things, tend to work only when they provide an obvious benefit to the people being targeted” (p. 16). Such registration techniques are not questioned by Portuguese citizens as they have become engrained in their administrative routine.

Thus, the socio-historical context of expanding state surveillance mechanisms and implementation of identification systems is fundamental to understand the development of these systems and its specificities. This can be applied to other southern European countries with a history of political repression and similar cultural

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<sup>10</sup> France illustrates this very well, since there was resistance from the population towards the process of implementation of French national identity card (and, in particular, regarding the inclusion of fingerprints in the document, due to its association with *criminals* (Ceyhan, 2008, Mattelart, 2010)).

<sup>11</sup> This citizen card has other elements that were not included in the ID card, namely the address, digital signature and the print of the left index finger (the ID card only included the print of the right index finger). This smart card not only replaces the ID card but also several previous documents such as the public health service card, the social security card, the taxpayer card and the voter registration card.



attributes (Boersma et al. 2014; Samatas 2005). In Portugal, the authoritarian legacy of dictatorship still has impacts, namely at a cultural level of mentalities (Machado & Frois 2014). These historical and socio-cultural aspects and, in particular, this authoritarian past that isolated Portugal from the rest of Europe, allow us to situate these practices that aim to foster a greater control over the population. As Simon Cole (2001) stated: “identification methods do not flourish and become widely accepted solely on technical grounds. The acceptance of a new identifier as useful and reliable occurs within a particular social, cultural, and historical context” (p. 293).

As we already highlighted, after the application of such identification technologies in the control of *risky populations*, they started being extended to all the citizens (Madureira 2003). Criminal identification practices were extended to the civil sphere and the desire to identify and monitor the *suspicious* bodies was constantly extended to those that are considered *respectable* citizens (Caplan and Torpey, 2001; Cole 2001; Finn 2005 and 2009; Kaluszynski 2001; Madureira 2003). Nowadays, this *dual use* is also applied to genetic identification with the creation of a DNA database for civil and criminal identification purposes (Machado & Frois 2014; Machado & Prainsack 2014).

### **Genetic identification and databases**

As the 20th century came to an end, the developments in molecular biology brought us into a new era: the *era of genetics* (Cole 2001). This new stage highlights the use of genetic profiles (digital representations of genetic information that results from the analysis of biological samples) and foresees the capacity of DNA technology to overcome the fingerprint. Saks and Koehler (2005 and 2008) address the transition to a new paradigm in forensic science, from the traditional forensic sciences towards the use of DNA.

Using the characteristic sequences in the DNA of each individual, the so-called DNA polymorphisms, Alec Jeffreys developed the first DNA fingerprinting techniques during the 1980's (Cole 2001; Gill et al. 1985; Jeffreys et al. 1985). They were used for the first time in the course of a criminal investigation in 1987 in the UK, and this marked the beginning of a new process of human identification and its application in the exoneration or conviction of individuals (Cole 2001; McCartney 2010). This would occur through the comparison of a genetic profile obtained from the analysis of biological evidence collected at the crime scene with the genetic profile from the suspect (Cole 2001; Houck & Siegel 2010). In Portugal, such comparisons and use of DNA during criminal investigation has occurred since the 1990s (Miranda 2014).

With the emergence of the computer and the use of electronic databases, it was possible to develop automated criminal identification systems, which also incorporated genetic profiles. This digital revolution had impacts on the surveillance and monitoring practices of *risky* individuals and *dangerous* populations, and the *digital digits* started to dominate (Cole 2001). As we will see, different Portuguese Criminal Justice institutions use these databases in order to store and access different types of information in a digital format (namely criminal records, photographs, fingerprints and genetic profiles).

Polícia Judiciária (PJ) is the police organisation responsible for the investigation of most serious crimes (Article 7 of Law No. 49/2008) and for the management of the Integrated Criminal Information System (SIIC, *Sistema Integrado*

*de Informação Criminal*) (*LOPJ* – Lei Orgânica da Polícia Judiciária, approved by the decree-law no 275-A/2000, 9<sup>th</sup> November). SIIC aims to centralise and manage national criminal information and enables the storage of personal details (name, nicknames), anthropometric measurements and signs (height, physical characteristics such as scars and tattoos), descriptive details (eye colour), photographs and lofoscopic elements (namely fingerprints). In Portugal, since the 1990's the AFIS (*Automated Fingerprint Identification System*) has also been managed by PJ, a database where the fingerprints and palm prints of *arguidos*<sup>12</sup> (Figure 13) and the lofoscopic traces collected from crime scenes are stored. SIIC also allows access to external databases (such as the SIP - *Sistema de Informação prisional*, Prison Information System) and PJ can also access information that is in the civil<sup>13</sup> and criminal identification services' files (Miranda 2014).

 <b>POLÍCIA JUDICIÁRIA</b> CPC - 10		Fórmula do subútil _____ / _____ / _____	
Rec. Nº _____		Data rec. _____ / _____ / _____	
Nº subútil _____		Fórmula pólice _____ - _____ - _____	
1. Polegar 		2. Índice 	
3. Médio 		4. Anelar 	
5. Anelar 		6. Anelar 	
7. Polegar 		8. Índice 	
9. Médio 		10. Anelar 	
11. Anelar 		12. Anelar 	
13. Polegar 		14. Índice 	
15. Médio 		16. Anelar 	
17. Anelar 		18. Anelar 	
19. Polegar 		20. Índice 	
21. Médio 		22. Anelar 	
23. Anelar 		24. Anelar 	

**Figure 13- Lofoscopic form used by PJ (before *livescan* technology)**

Such automated databases maximise the usefulness of genetic profiles, allowing the comparison and the creation of links between biological traces left at crime scenes and identifying/ excluding suspects whose profile is inserted into a DNA database (McCartney 2010). The first DNA database was established in the United Kingdom (England and Wales) back in 1995. Since then, the European Union, through the European Council Resolutions (1997 and 2001) and the Prüm Decision (2008/615/JHA and 2008/616/JHA), has been encouraging its member states to create DNA databases and share genetic profiles across borders (Cole 2001; McCartney 2010).

In Portugal, back in 2005, there was a political ambition to create a forensic DNA database extended to the entire population (Boavida 2005; Machado & Frois 2014; Machado & Prainsack 2014; Miranda 2014). Again, this did not seem to alarm the

<sup>12</sup> The *arguido* is a legal status that exists in the Portuguese jurisdiction and is designated for individuals that are not formally accused of a crime but are involved in a formal accusation or process of inquiry due to justified suspicions of crime (article 57 and 58 of the Portuguese Code of Criminal Procedure). Such status provides certain rights (namely, the knowledge of the details of the charges) and certain obligations (identity and residence statement or preventive prison) while the investigation is occurring.

<sup>13</sup> Indeed, the Law No. 33/99, 18<sup>th</sup> May that regulates civil identification and the national ID card refers that it is possible for police and judicial authorities to have access to such information during criminal investigations (art. 24). Thus the access to the fingerprints collected for the national ID card is allowed and they can be used in the comparison with the traces found at crime scenes (Machado and Frois 2014; Machado and Prainsack 2014).

citizens nor generate great controversy (Machado & Frois 2014; Machado & Prainsack 2014) and there was a certain indifference from media coverage (Boavida 2005). In 2006, during the first proposal to create a forensic DNA database, the political discourse portrayed it as a fundamental tool in the fight against crime and in the effectiveness of criminal justice system (Machado & Frois 2014). In 2008, the DNA database was established (Law no. 5/2008) for civil and criminal identification purposes. This database consists of a structured set of files with genetic profiles and, kept apart, a personal data file (individual identification information).

One of the elements included in the file with genetic profiles is the information collected from individuals convicted of serious crimes involving an effective prison sentence of 3 years or more (sentenced file) (Article 8 of Law 5/2008). The Portuguese DNA database can also include genetic profiles from laboratory or crime scene personnel responsible for the collection and analysis of samples, crime scene stains, unidentified corpses, missing persons or their relatives and volunteers. The notion of volunteer in the Portuguese context is different from the same notion in UK. While in UK the police can ask the “volunteers” to give a sample of DNA for speculative searching (*mass or intelligence led DNA screening*) (Williams & Johnson 2008); in Portugal, the citizens can voluntarily request a biological sample collection and donate it for inclusion of their genetic profiles in the DNA database (Article 6 of Law 5/2008). The number of such volunteer profiles is very small and, according to data provided by the body responsible for the Portuguese DNA database and its operations (INML - *Instituto Nacional de Medicina Legal*, the National Institute of Legal Medicine), until the end of 2017 there have been only *four genetic profiles* from volunteers in the database. However, a study developed by Helena Machado and Susana Silva (2014) explored if citizens would accept having their DNA profile inserted in this database through an online questionnaire applied to 628 individuals in Portugal. The answers highlighted citizens’ willingness to donate voluntarily a sample for profiling and inclusion in the DNA database, in order to contribute to the expansion of this database and, consequently, protect the society and the individual.

Although the initial intention was to create a universal DNA database, the Portuguese legislation turned out to be quite restrictive in terms of criteria for genetic profile inclusion and removal when compared with other European countries. Hence, its growth has been very slow and, since the database became operational (12<sup>th</sup> February, 2010) until the end of 2017, the database contains a total of 9996 genetic profiles, with 7430 of those being from convicted individuals. We will now conclude by reflecting on the development of these technologies and the continuities or discontinuities that follow such identification strategies and mechanisms.

## **Final reflections**

In this article, we explored the historical trajectory of criminal identification technologies in Portugal since the end of the 19<sup>th</sup> century: from anthropometric measurements, to physical descriptions, photographs, fingerprints and genetic profiles. The body, combined with technology and scientific knowledge, is documented and represented by different mechanisms of state control. It is the epistemic authority of science that legitimises the development of these mechanisms and this occurs through the translation of corporeality in information that has not only a physical, but also visual and biological nature.

Such criminal identification mechanisms have been transformed technologically and the modes of representation of the *criminal* have been changed. The drawers with paper bulletins gave way to computerised databases and the digital format. However, there are continuities in the trajectory of these technologies and aspects that are, in essence, similar. The fingerprint intended, through a visual image, to transcribe the identity of the *criminal* in language. Also the Bertillon method was meant to reduce the identity and the body to a language that can be coded in order to transform the *criminal* body into information. The same happens, a century later, with the use of genetic profiles. All these tools seek to control and monitor *suspicious* bodies, by making them visible.

The need to identify these *suspicious* bodies has been constantly used as a political argument to legitimise the implementation of these strategies of information gathering and control. For instance, from the late 19th century to the 20th century, the discourses that argue the need to implement Bertillon's method and fingerprinting resemble the political discourse associated to the creation of a DNA database in the 21st century. The same way anthropometry and fingerprinting were seen as the solution for the discovery and identification of the true *criminal*, we verify the same enthusiasm and optimism in reaching the truth with the use of DNA. In fact, throughout history, the identification of the *criminal* has emerged as the immediately pointed solution for combating and preventing crime, reducing the complexity of social, cultural and political problems that are inherent (Garland 2001) and assuming the *criminal* as an *ontological category* (Pavlich 2009).

Even if these identification procedures were introduced for an increased control and management of those deemed to be "dangerous", we highlighted how these procedures tend to be extended to the entire Portuguese population. If initially the criminals were measured, photographed, described and subjected to fingerprinting and genetic identification, the law-abiding and "respectable" citizens were also involved in such procedures. This is illustrated not only through the use of citizen ID cards with photographs and fingerprints but also the voluntary citizen participation in the development of the forensic DNA database (Machado and Silva 2014).

The other argument that has been used in Portugal during the implementation of these identification technologies is the need to follow and to keep up with such technological developments. This shows a political will "to be modern", with constant references to foreign countries deemed to be more advanced (in contrast with Portugal and its "backwardness"), where these technologies were already implemented. These technologies are seen as a symbol of what is modern, i.e. progress and development (Frois 2008 and 2013; Machado & Frois 2014) and this applies to the implementation of these technologies now or more than a century ago.

Finally, this article has been discussing the application of identification techniques by the state. However, we must acknowledge that these technologies have expanded beyond their initial purposes by becoming embedded into our everyday lives (Lyon, 2018). Consider, for instance, the use of Touch ID on the most recent Apple devices or facial recognition on social media. Such uses of fingerprints and facial features go beyond policing and state security interests, as they are increasingly used by corporate entities for commercial purposes (Lyon, 2001 and 2018; Szreter and Breckenridge, 2012). When discussing surveillance and technology, David Lyon (2014) believes that "today's technologies grow out of yesterdays" and "a sense of history is badly needed to grasp the context of the contemporary" (p. 33). Further work focused on the use of "today's technologies" must consider their historical evolution. In order to situate the interweaving of past and current practices of identity

documentation and recognition, its (dis)continuities must be historically and culturally contextualised. This is particularly important when trying to understand their blurred boundaries of use by both state and private sector. Ultimately, these technologies should be subject to comparative analysis so there is a better understanding of their use both within and beyond national borders.

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